

NEW AFRICAN AND ASIAN TINGIDAE (HEMIPTERA)

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The present paper contains the descriptions of five new lacebugs of the subfamily Tinginae from Asia and Africa. The types have been deposited as stated under the description of each species. In the structural measurements, 80 units equal one millimeter.

CYSTECHILA INCOLANA Drake n. sp.

Small, brownish testaceous to dark brown, without color markings. Head black, armed with five moderately large testaceous spines, with median spine and hind pair appressed and front pair turned downward; eyes moderately large, blackish fuscous; bucculae contiguous in front. Rostrum brownish, extending to middle of mesosternum; laminae testaceous, uniseriate, narrowly separated on mesosternum, more widely separated and cordate on metasternum. Antennae testaceous with first two segments brownish and fourth mostly black, indistinctly pubescent, measurements — I, 8; II, 6; III, 45; IV, 16.

Pronotum moderately convex, coarsely punctate, tricarinate; median carina composed of one row of small areolae; lateral carinae concealed on disc by reflexed paranota but exposed on hind part of disc and the posterior projection, slightly divergent anteriorly, the areolae a little smaller than in media carina; hood very small, inflated; paranota moderately wide, reflexed, barely concealing lateral carinae in widest part (on disc), feebly raised above pronotal surface at humeri, sharply rounded behind.

Elytra not wider than widest part of pronotum, feebly slowly narrowed posteriorly on apical half; costal area wanting, represented only by the vein forming outer edge of subcostal area; subcostal area nearly vertical, largely biseriate; discoidal area large, extending beyond middle of elytra, with outer boundary straight, acutely angulate at both base and apex, four or five areolae deep at widest part (middle); with areolae same size as in subcostal area; sutural area with cells larger apically. Body beneath black-fuscous.

TYPE (male), Lion's Head, Capetown, South Africa, June, 1920; ALLOTYPE (female), Ceres, Cape Province, elevation 1,500 feet, Jan., 1921, both in British Museum. PARATYPES: 2 specimens with types and 1 from Port St. John, Pondoland, Sept., 1912.

Very similar in general aspects to *C. cremeri* Drake, but easily separated from it and other South African *Cysteochila* by the scarcely inflated paranota at humeral angles, lack of costal areas and distinctly narrowed apical half of elytra.

CYSTECHILA VADOSA Drake n. sp.

Small, robust, dark brown with paranota across humeri, crest of small hood, transverse band near middle of costal and subcostal

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areas and numerous veinlets in discoidal and sutural areas blackish. Head dark fuscous, the spines represented by small tubercles; eyes moderately large, blackish fuscous; bucculae closed in front. Antennae dark brown with last segment black, indistinctly pubescent, measurements — I, 8; II, 8; III, 68; IV, 20. Rostrum brownish, extending to end of sulcus; laminae thick, areolate, open behind.

Pronotum wide, strongly convex, coarsely punctate, strongly narrowed anteriorly, largely concealed from dorsal aspects by reflexed paranota; hood very small, almost circular in outline, placed just back of front row of cells of collar; median carina distinctly raised but without areolae; lateral carinae covered on disc by reflexed paranota but visible on posterior process, there convergent anteriorly; paranota very large, reflexed, somewhat like an inverted bowl in shape, with outer margin resting on pronotal surface and in contact with median carina, the discal part of bowl elevated a little above pronotal surface. Orifice present. Legs rather short, dark brown, sparsely beset with setalike, golden pubescence. Body beneath dark, brown, with mesosternum blackish, sparsely provided with short, somewhat golden pubescence.

Elytra equal in width (widest part just behind posterior apex of pronotum) to pronotum across humeri, with sutural areas overlapping and apices jointly rounded; costal area uniseriate, the areolae moderately large, subquadrate, clear or whitish; subcostal area biseriate, the areolae smaller than in costal area; discoidal area large, reaching beyond middle of elytra, with outer boundary a little convex within, acutely angulate at base and at apex, widest at middle, there six areolae deep.

Length, 2.75 mm.; width, 1:15 mm.

TYPE (male), Umkomaas, Natal, South Africa, Feb. 16, 1953. A. L. Capener, in Drake Collection.

Separated from its South African congeners by the broader form and darker color; the paranota distinctly elevated across humeral angles.

CYSTEOCHILA MALAYANA Drake n. sp.

Moderately large, parallel-sided, testaceous, with fuscous markings as stated in structures. Head very short, reddish to blackish fuscous; eyes large, dark fuscous; bucculae broad, brownish testaceous, with ends convergent in front. Rostrum testaceous, extending to middle of metasternum; laminae testaceous, uniseriate, not widely separated, meeting behind. Antennae testaceous with terminal segment blackish, indistinctly pubescent, measurements — I, 12; II, 10; III, 108; IV, 34.

Pronotum moderately convex coarsely punctate, fuscous to dark fuscous, with collar, hood, anterior part of paranota and posterior pronotal projection testaceous; hood very small, a little longer than high; median carina uniseriate, slightly more elevated anteriorly, the areolae small; lateral carinae not quite as high as median, the areolae scarcely visible; paranota moderately wide, completely re-

flexed, resting flatly on pronotal surface, with outer margin not attaining median carina and distinctly concave in front of pronotal disc. Legs testaceous, indistinctly pubescent.

Elytra testaceous, with a narrow median band (veinlets only) and a subapical band fuscous or dark fuscous (apical band with a large triangular projection extending anteriorly into sutural area); costal area uniseriate, the areolae small and hyaline; subcostal area wider, biseriate; discoidal area extending beyond middle of elytra, acutely angulate at both base and apex, the areolae moderately large and four deep at middle. Body beneath brownish.

Length, 3.50 mm.; width, 1.10 mm.

TYPE (male) and ALLOTYPE (female), Selangor, Malaya (Ulu Klang Jungle), March 22, 1827, in British Museum. PARATYPES. 2 specimens same date as type.

Distinguished at once from other Oriental members of the genus by the concave outer margin of the paranota in front of the center of pronotal disc.

TINGIS BENGALANA Drake n. sp.

Head blackish ferruginous, armed with five whitish spines, the hind longest and appressed, the other three turned downward; eyes quite large, black; pubescence whitish, a little frosted; bucculae brownish with inferior margin testaceous, convergent in front. Antennae moderately stout, brownish ferruginous, provided with short golden pubescence. measurements — I, 18; II, 15; III, 100; IV, 35. Rostrum dark fuscous, nearly reaching to end of channel; laminae testaceous, coated with whitish exudate.

Pronotum very wide, moderately convex, coarsely punctate, tricarinate, clothed with very fine, recumbent, yellowish pubescence, also lightly coated with a whitish exudate; hood moderately large, inflated, testaceous, pyriform, projected posteriorly, terminating posteriorly a little in front of center of disc, not elevated and truncate in front, not as high as long, the width and height subequal; carinae elevated, uniseriate, the median a little more elevated than lateral; lateral carinae parallel, terminating anteriorly a short distance behind hood; paranota testaceous, long, rather narrow, turned upright, uniseriate. Ostiolar canal upright. Legs brownish ferruginous.

Elytra pale testaceous, with premedian band in costal area, numerous veinlets in subcostal and discoidal areas and most of veinlets in sutural area dark fuscous; entire surface very lightly coated with whitish exudate; costal area moderately wide, mostly biseriate, irregularly triseriate in a few places, the areolae (save in band) clear; subcostal area mostly biseriate, triseriate opposite apex of discoidal area, extending a little beyond middle of elytra, acutely angulate at base and at apex, five areolae deep a little behind middle. Body beneath dark ferruginous. Legs rather slender, dark ferruginous, shortly pubescent, lightly coated with whitish exudate.

Length, 3.95 mm., width, 2.10 mm.

TYPE (male), Tipahar, Rajmahal, Bengal, India, July 7, 1909, Annandale, British Museum. PARATYPES: 1 example (broken), same data as type.

Separated from other members of genus *Tingis* (subg. *Tingis*) by color, position and shape of hood, broader form, and erect and narrow paranota.

DICTYOTINGIS MONTICULA Drake n. sp.

Head grayish testaceous, long, broad, with apex attaining apices of second antennal segments, considerably produced in front of eyes and in front of base of antennae, armed with five spines; median spine (situated between eyes) and frontal pair (slightly behind bases of antennae) short, pale, tubercle-like and erect; posterior pair (behind eyes). slender, appressed, pale, scarcely attaining front margins of eyes; eyes rather small, black, widely separated; bucculae very long, parallel, narrow, mostly uniseriate, biseriate behind, with apices not quite attaining apex of head. Rostrum extremely long, brownish testaceous with darkened tip, almost reaching to penultimate segment of venter; laminae rather low, whitish, areolate, entirely open behind. Antennae grayish stramineous, with segment largely blackish fuscous, sparsely indistinctly pubescent, first segment not strongly swollen, measurements — I, 16; II, 10; III, 112; IV, 40.

Pronotum wide, moderately convex, coarsely punctate, dark brown with veinlets of paranota partly stramineous or testaceous and areolae clouded with dark fuscous, almost entirely concealed from dorsal aspect by reflexed, thimble-like paranota (collar, small hood, median carina and narrow strip on each side of it, and posterior projection are visible from dorsal view); median carina raised, thick, uniseriate; lateral carinae exposed on posterior process, there low and nearly parallel; paranota very large, thimble-shaped, inflated, with circular margins resting on pronotal surface near median carina, slightly tilted outward, longer than high (82:64), not quite as wide as long, with lower row of cells within subquadrate and arranged in regular row, other cells nearly equal in size but five- or six-sided.

Elytra slowly rounded widened at base, widest a little in front of middle, there wider than pronotum across paranota, roundly narrowed posteriorly, slightly constricted on sides opposite apex of discoidal area, with apices jointly rounded; costal area moderately wide, mostly triseriate, biseriate at base and in apical part, the areolae whitish or clear and not regularly arranged in rows; discoidal with outer boundary vein straight and running slightly obliquely inward to middle, then deeply concavely extended into subcostal area to apex, with an adventitious vein running obliquely across area near middle, five or six cells deep in widest part; sutural area large, with areolae brownish. Wings smoky, nearly as long as elytra.

Length, 5.00 mm., width, 2.40 mm

TYPE (female), Naga Hills, Assam, elevation 5,000 ft., 1940, in Drake collection.

Easily distinguished from the genotype *D. gibberis* Drake by its much smaller hood, shorter antennae, thimble-shaped paranota, concavely expanded apical half of discoidal area into subcostal area. In *gibberis* the paranota are strongly transversely constricted just in front of the middle, which makes them longer, narrower and leaves more of the median part of pronotum uncovered; the first antennal segment is also strongly enlarged apically. Although both species belong to the subfamily Tinginae, the head is long, strongly produced anteriorly in front of eyes; the bucculae are also long, parallel and open in front.